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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,784	03/06/2002	Akihiko Ito	111731	8518
25944	7590	07/29/2004	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			NGUYEN, JIMMY H	
			ART UNIT	PAPER NUMBER
			2673	

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/090,784

Applicant(s)

ITO, AKIHIKO

WB

Examiner

Jimmy H. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

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### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This Office Action is made in response to applicant's amendment filed on 07/01/2004. Claims 4-33 are cancelled, and claims 1-3 are currently pending in the application. An action follows below:

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito et al. (USPN: 5,877,738), hereinafter Ito, and further in view of Tsuzuki et al. (USPN: 4,465,999), hereinafter Tsuzuki.

As per claims 1-3, Ito discloses a conventional LCD device and an associated conventional driving method for the LCD device, which comprises a plurality of scanning electrodes (row electrodes X1-Xn, see figs. 47A and 47A', col. 5, lines 15-16) and a plurality of signal electrodes (column electrodes Y1-Ym, fig. 47B, col. 5, lines 38-39) arranged to cross the plurality of scanning electrodes (X1, ... Xn), which are divided into j groups, each consisting of more than one scanning electrodes that are selected simultaneously (see figs. 47A and 47A', col. 5, lines 10-17). As noting in figs. 47A and 47A', Ito further discloses a step of simultaneously applying scanning signals of one of three predetermined scanning voltages, such as a maximum voltage (V1), a minimum voltage (-V1) and an averaged voltage (0V). As noting in fig. 47B, Ito discloses a step of applying to a signal electrode (Y1) a data signal of one of three predetermined

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data voltages such as a maximum data voltage ( $V_2$ ), a minimum data voltage ( $-V_2$ ) and an averaged data voltage ( $0V$ ). Further, as noting in figs. 47A and 47A', the description at col. 5, lines 10-17 and lines 45-50, and in fig. 45A and the description at col. 3, lines 9-28, Ito expressly teaches that a number of scanning electrodes to be simultaneously selected is two, three or  $h$  ( $h$  is greater than one). Ito does not expressly teach the voltages  $V_1$  and  $V_2$  being equal. Accordingly, Ito teaches all the claimed limitations except that the two predetermined scanning voltages ( $V_1$ ,  $-V_1$ ) are respectively same as the two predetermined data voltages ( $V_2$ ,  $-V_2$ ).

However, Tsuzuki teaches a related LCD device (col. 2, lines 36-41, see fig. 18), wherein the data signals (column drive signal  $C_0$ ,  $C_{12}$ , ..., see fig. 7), which are applied to signal electrodes (column electrodes 55 and 56, col. 11, lines 10-11), should have three voltage levels ( $V_0$ ,  $V_1$ ,  $V_2$ ), which are made the same as three voltage levels of the scanning signals (row drive signals  $r_1$ - $r_4$ , see fig. 7) applied to scanning electrodes (row electrodes 51-54, col. 11, line 10) (i.e., the three predetermined voltages applied to both the column electrodes and row electrodes), so as to reduce a number of voltage levels required to drive the LCD device (col. 11, lines 38-44). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to provide three predetermined voltages to both signal electrodes and scanning electrodes in the conventional LCD device disclosed by Ito, in view of the teaching in the Tsuzuki reference, because this would reduce a number of voltage levels required to drive the LCD device, as taught by Tsuzuki (col. 11, lines 38-44).

#### *Response to Arguments*

4. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

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5. Applicant's arguments, see page 3, filed 07/01/2004, with respect to the drawing objections, the claim objections and the rejections under 35 USC 112, first paragraph, in the last Office action dated 04/02/2004 have been fully considered and are persuasive in view of the amendment filed 07/01/2004. The drawing objections, the claim objections and the rejections under 35 USC 112, first paragraph, in the last Office action dated 04/02/2004 have been withdrawn.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is (703) 306-5422. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at (703) 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231


or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

JHN  
July 26, 2004

  
Jimmy H. Nguyen  
Examiner  
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